

Serial No.: 10/089,339

REMARKS

Status Summary

Claims 1-27 are pending in the present application. Claims 1-27 presently stand rejected. Claims 1, 3-7, 10-18, 20-21, 23, and 25-27 have been amended and Claim 22 has been canceled by the present amendment. Therefore, upon entry of Amendment A, Claims 1-21 and 23-27 will remain pending in the subject patent application.

Claim Rejections - 35 U.S.C. § 112

Claims 1-27 stand rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that the definition of the linking group in Claim 1 is missing and thus the metes and bounds of Claim 1 and its dependent claims cannot be determined. Additionally, regarding Claim 18, the Examiner states that there is no basis for the linking group L in Claim 1 and thus it must be defined in Claim 18, or alternatively, the linking group in Claim 1 must be called L and then defined.

In response to the Examiner's comments, applicants amended Claim 1 by labeling the linking group "L" and reciting a definition of "L" therein. Support for this amendment can be found on page 9, lines 20-24 of the published PCT

Serial No.: 10/089,339

Application No. WO 01/25337 A1 (hereinafter the "'337 published PCT application").

Claim 11 stands rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that there is no definition of L, Z, Y, X or m in Claim 11 and since Claim 11 in an independent claim, it must define all of the components of the claimed subject matter. Additionally, the Examiner states that there is a definition of n but there is no variable n in Claim 11 such that Claim 11 is unclear and cannot be further evaluated on its merits.

In response to the Examiner's comments, applicants amended Claim 11 by reciting definitions of L, Z, Y, X and m therein. Support for these amendments to Claim 11 can be found on page 9, lines 20-28, and page 10, lines 1-6, of the '337 published PCT application. Further, in response to the Examiner's comments, applicants amended Claim 11 by striking the definition of the variable n.

Claim 27 stands rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that there is no antecedent basis in Claim 23 for "the pH" recited on line 1 of Claim 27.

Serial No.: 10/089,339

In response to the Examiner's comments, applicants amended Claims 25 and 26 by providing a pH range of the dye compositions claimed therein. Support for these amendments can be found on page 21, line 10, of the '337 published PCT application. Further, applicants removed the dependency on Claim 23 from Claim 27 and amended Claim 27 to depend from Claim 25.

Finally, Claims 12-17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that Claims 12-17 provide for the use of the compound of Claim 1 but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

In response to the Examiner's comments, by way of a clarifying, non-limiting amendment, applicants amended Claims 12-17 in accordance with § 2173.05(q) of the Manual of Patent Examining Procedure to set forth a step, e.g., contacting a substrate with a compound, involved in the process. Applicants respectfully submit that Claims 12-17 as amended particularly point out and distinctly claim the subject matter disclosed in the instant application.

Applicants have addressed all issues raised by the Examiner and submit that the 35 U.S.C. § 112 objections have been overcome by applicants' amendments as set forth herein, and therefore request formal withdrawal of the rejections.

Claim Rejections - 35 U.S.C. § 101

Claims 12-17 are rejected under 35 U.S.C. § 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not proper process claim under 35 U.S.C. § 101.

In response to the Examiner's comments, by way of a clarifying, non-limiting amendment, applicants amended Claims 12-17 in accordance with § 2173.05(q) of the Manual of Patent Examining Procedure to set forth a step, e.g., contacting a substrate with a compound, involved in the process. Applicants respectfully submit that Claims 12-17 as amended are proper process claims under 35 U.S.C. § 101.

Applicants have addressed all issues raised by the Examiner and submit that the 35 U.S.C. § 101 rejections have been overcome by applicants' amendments as set forth herein, and therefore request formal withdrawal of the rejections.

Double Patenting

Claim 22 stands objected to by the Examiner under 37 C.F.R. § 1.75 as being a substantial duplicate of Claim 1. The Examiner contends that since Claim 18 claims a method of making the dye of Claim 1 then the product of the process of Claim 18 would be identical to the dye claimed in Claim 1.

Serial No.: 10/089,339

Applicants have canceled Claim 22 and therefore this objection is moot.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 2, 4-10, 12-18, and 20-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,092,478 to Plant et al. (hereinafter "Plant et al."). The Examiner asserts that Plant et al. discloses fiber-reactive triphendioxazine chromophores bonded through an NH or NR linking group to a triazine ring, wherein said triazine ring is further substituted with phenyl phosphonic acid or naphthyl phosphonic acid. The Examiner further asserts that the dyes disclosed by Plant et al. correspond to the dyestuffs claimed in the instant application in the following manner: (a) the chromophore is triphendioxazine; (b) the nitrogen containing heterocycle is triazine; and (c) the linking group which links the chromophore to the nitrogen-containing heterocycle is NH or NR1 as claimed.

Additionally, the Examiner asserts that the method of making the dye disclosed in Plant et al. is the same as claimed in Claim 18, as disclosed in column 5, line 37 et seq. Finally, the Examiner asserts that the pH range of 5.5 for the reaction is disclosed at the top of column 6 in Plant et al. and that the use of said dyes to dye cellulose, wool, polyamide, silk, hair and leather is taught at column 9, lines 50 et seq.

Claims 1, 2, 4-10 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,139,345 to Crabtree et al. (hereinafter

Serial No.: 10/089,339

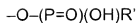
"Crabtree et al."). The Examiner asserts that Crabtree et al. discloses fiber-reactive dyestuffs comprising chromophores which contain the sodium salt of phenylphosphoric acid and that the chromophore in dye 27 in columns 7 and 8 of Crabtree et al. is an azo dye and is linked to the triazine by NH. The Examiner further asserts that the chromophore in dye 32 is triphendioxazine, which is linked to the chromophore by NH and that said dyes are used to dye cellulose.

Preliminarily, applicants note that it is well settled that for a cited reference to qualify as prior art under 35 U.S.C. § 102, each element of the claimed invention must be disclosed within the reference. "It is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention." Hybritec, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986). Applicants respectfully submit that for the cited references to be anticipated references under 35 U.S.C. § 102, the references must disclose each and every element of the claimed invention. Therefore, the positions of the Examiner as summarized above with respect to the rejected claims are respectfully traversed by applicants as described below.

Patentable Distinctions Over U.S. Patent No. 4,092,478 to Plant et al.

Applicants note that the phosphate derivative comprising the Y group in the instant application preferably is selected from phosphonates having the formula

Serial No.: 10/089,339



wherein R' is any suitable nucleophilic moiety. Suitable R' groups for use in the instant application are alkyl or aryl residues which contain at least one nucleophilic group substituent. Preferable R' groups and nucleophilic substituents of the R' groups are described on pages 8 and 9 of the '337 published PCT application. Importantly, the hydroxyl group is not included in the description of R' in the instant application. In fact, the hydroxyl group is explicitly excluded from the definition of the R' group on page 7, line 29 of the '337 published PCT application. Further, Claim 1 of the instant application preferably excludes phosphonates wherein the nucleophilic moiety comprising R' is OH. Thus, applicants respectfully assert that the instant application actually teaches away from the triphendioxazine triazinyl dye compounds comprising phosphonic acid groups of the formula $-\text{PO}_3\text{H}_2$ disclosed in Plant et al.

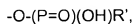
Additionally, a preferred Y group of the instant application is derived from aceto diphosphonic acid, i.e., a Y group with the formula:



See, e.g., Claims 2 and 3 and page 9, lines 11-13, of the '337 published PCT application. Applicants respectfully assert that the triphendioxazine triazinyl dye compounds comprising this phosphoric acid diester group are not anticipated by the mono-phosphoric acids disclosed in Plant et al.

Applicants have amended Claims 1 and 11 to more particularly describe the subject matter of the present invention, wherein the reactive dye compound claimed therein is subject to the proviso that if the phosphonate derivative is selected from phosphonates having the formula: $-O-(P=O)(OH)R'$, wherein R' is any suitable nucleophilic moiety, R' is not OH. Support for this amendment is found in the application as filed. Applicants respectfully assert that this amendment to Claims 1 and 11 expressly excludes triphenyldioxazine triazinyl dyestuffs having phosphonic acid groups described in Columns 4 to 6 and claimed in Claim 8 of Plant et al. and thus, applicants respectfully assert that amended Claims 1 and 11 are not anticipated by Plant et al.

Further, applicants respectfully submit in view of the above amendment and remarks, that the pH range of from about 2 to about 8 recited in Claim 20 of the instant application for a process for the preparation of triphenyldioxazine triazinyl dye compounds comprising phosphonates having the formula:

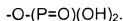


wherein R' is any suitable nucleophilic moiety, R' is not OH, is not anticipated by the pH range disclosed at the top of column 6 of Plant et al. Accordingly, applicants respectfully submit that the use of said dye compounds to dye cellulose, wool, polyamide, silk, hair and leather also is not anticipated by said use taught at column 9, lines 50 et seq. of Plant et al.

Further, one of ordinary skill in the art would not be motivated by Plant et al. to make triphenyldioxazine triazinyl dye compounds comprising a

Serial No.: 10/089,339

phosphonate group having the formula: $-O-(P=O)(OH)R'$, wherein R' is any nucleophilic moiety other than OH. The triphendioxazine triazinyl dye compounds disclosed or claimed in Plant et al. comprise a phosphoric acid group having the formula:



As such, Plant et al. does not suggest substituting an R' group for one of the OH groups of the phosphoric acid moiety.

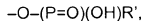
Additionally, the reactive dye compounds of the instant application surprisingly exhibit a high Exhaustion Value and a high Fixation Value. See, e.g., the '337 published PCT application, Example 4, Table A, page 26. One of ordinary skill in the art would not be motivated by Plant et al. to make triphendioxazine triazinyl dye compounds comprising a phosphonate group having the formula $-O-(P=O)(OH)R'$, wherein R' is any nucleophilic moiety other than OH, which exhibit such high Exhaustion and Fixation Values.

Since independent Claims 1 and 11 are allowable as amended, applicants further submit that dependent Claims 2, 4-10, 12-18 and 20-22 are also allowable since they depend from Claims 1 and 11 and merely add additional limitations thereto.

Patentable Distinctions Over U.S. Patent No. 4,139,345 to Crabtree et al.

Serial No.: 10/089,339

Applicants note that the phosphate derivative comprising the Y group in the instant application preferably is selected from phosphonates having the formula:



wherein R' is any suitable nucleophilic moiety. Suitable R' groups for use in the instant application are alkyl or aryl residues which contain at least one nucleophilic group substituent. Preferable R' groups and nucleophilic substituents of the R' groups are described on pages 8 and 9 of the '337 published PCT application. Importantly, metals are not included in the description of R' in the instant application. In fact, metals, such as magnesium, lithium, potassium and sodium, which are disclosed and claimed in Crabtree et al., see, e.g., column 2, lines 37-39 and Claim 4, do not fall within the description of R' in the instant application. As defined on page 7, lines 28-32 of the '337 published PCT application, R' is any suitable nucleophile group, wherein the term "nucleophilic" group is further defined to mean "a negative ion or any neutral molecule that has an unshared electron pair." Metals, such as magnesium, lithium, potassium and sodium, when used in the form of a salt as disclosed and claimed in Crabtree et al., constitute a positive ion, and further, do not have an unshared electron pair.

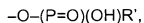
Applicants have amended Claims 1 and 11 to more particularly describe the subject matter of the present invention, wherein the reactive dye compound claimed therein is subject to the proviso that if the phosphonate derivative is

Serial No.: 10/089,339

selected from phosphonates having the formula: -O-(P=O)(OH)R', R' is any suitable nucleophilic moiety. Support for this amendment is found in the application as filed. Applicants respectfully assert that the instant application and amended Claims 1 and 11 actually teach away from the dye compounds comprising phosphonic acid groups of the formula:



disclosed in Crabtree et al. Further, in view of the above remarks, applicants respectfully submit that the use of reactive dyes comprising phosphonates of the formula:



wherein R' is not a metal, to dye cellulose is not taught or suggested by Crabtree et al.

Since independent Claims 1 and 11 are allowable as amended, applicants further submit that dependent Claims 2, 4-10, and 12 are also allowable since they depend from Claims 1 and 11 and merely add additional limitations thereto.

Applicants respectfully submit that in view of the above remarks neither of the cited references discloses each and every element of the present invention and applicants respectfully request that the rejection of the claims

Serial No.: 10/089,339

under 35 U.S.C. § 102(b) be withdrawn and all pending claims allowed at this time.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON & TAYLOR, P.A.

Date: 11-11-09

By:

Richard E. Jenkins
Richard E. Jenkins
Registration No. 28,428

297/183/9 PCT/US

REJ/EEM/bss/cht

Customer No: 25297



"Express Mail" mailing number: EV 412493122 US
Date of Deposit: November 12, 2003
I hereby certify that correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Cathi H. Turner
Cathi H. Turner

RECEIVED
NOV 26 2003
TC 1700
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Lewis et al.

Group Art Unit: 1751

Serial No.: 10/089,339

Examiner: Einsmann, Margaret

Filed: March 27, 2002

Docket No.: 297/183/9 PCT/US

Confirmation No.: 1455

For: REACTIVE DYE COMPOUNDS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION AND FEE FOR EXTENSION OF TIME
UNDER 37 CFR 1.136(a)

Sir:

This is responsive to the Official Action dated May 20, 2003. A Petition for a 3-Month Extension of Time is filed herewith extending the time for response up to and including November 20, 2003.

An Amendment A responsive to the outstanding Official Action is being filed simultaneously herewith.

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account Number 50-0426.

Respectfully submitted,

JENKINS, WILSON & TAYLOR, P.A.

Date: 11-12-03

By:

Richard E. Jenkins
Richard E. Jenkins
Registration No. 28,428

REJ/EEM/cht

Customer No: 25297

11/20/2003 EMAIL: 00000666 10089339

01 FC:2253

475.00 DA